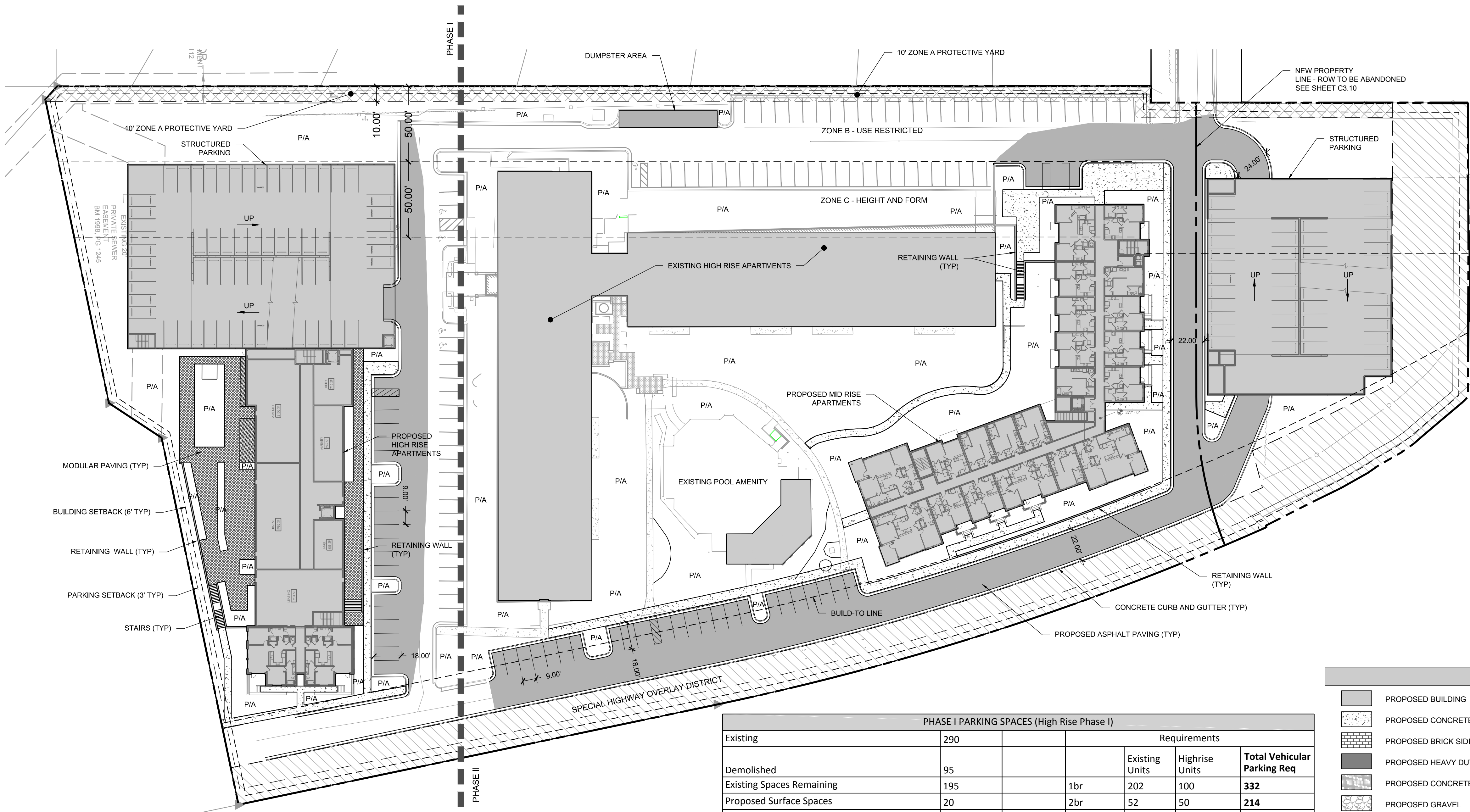


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PHASE I PARKING SPACES (High Rise Phase I)					
Existing	290		Requirements		
Demolished	95		Existing Units	Highrise Units	Total Vehicular Parking Req
Existing Spaces Remaining	195	1br	202	100	332
Proposed Surface Spaces	20	2br	52	50	214
Proposed Deck Spaces	290	total	331	215	546
Total Parking On Site	505			10% reduction =	492

PHASE II PARKING SPACES (Midrise Phase II)					
Existing (PHASE I)	505		Requirements		
Demolished	110		Existing Units	Midrise Units	Total Vehicular Parking Req
Existing Spaces Remaining	395	1br	302	68	407
Proposed Surface Spaces	27	2br	102	21	258
Proposed Deck Spaces	201	total	546	119	665
Total Parking On Site (Including Phase I)	623			10% reduction =	599

SITE LEGEND:			
	PROPOSED BUILDING		PROPOSED CIP WALL
	PROPOSED CONCRETE SIDEWALK		PROPOSED WHEEL STOP
	PROPOSED BRICK SIDEWALK		PROPOSED GRAVEL TRAIL
	PROPOSED HEAVY DUTY PAVEMENT		PROPOSED ASPHALT TRAIL
	PROPOSED CONCRETE PAVERS		PROPOSED TREELINE
	PROPOSED GRAVEL		PROPOSED FENCE
	PROPOSED CURB & GUTTER		PROPOSED VEHICLE GATE (X' WIDE)
	PROPOSED STOP BAR		PROPOSED LIGHT
	PROPOSED CROSSWALK		PROPOSED TRANSFORMER
	PROPOSED 6' WIDE STANDARD CROSSWALK		PROPOSED CONDENSER
	PROPOSED 10' WIDE HIGH VISIBILITY CROSSWALK		PROPOSED BIKE RACK
	PROPOSED SIGN		PROPOSED BENCH
	PROPOSED ADA PARKING SPACE		PROPOSED BOLLARD
	PROPOSED KEYSTONE WALL		PROPOSED PEDESTRIAN STEEL PLATE
			PROPOSED ADA APARTMENT UNIT
			LIMITS OF DISTURBANCE
			PLANTING AREA

GENERAL NOTES:

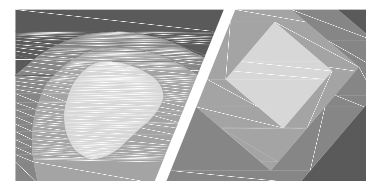
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE OFFICE OF STATE CONSTRUCTION, DEPARTMENT OF INSURANCE, NCDNR, AND ALL OTHER APPLICABLE LOCAL, STATE AND FEDERAL GUIDELINES. ALL UTILITY CONSTRUCTION SHALL COMPLY WITH APPLICABLE LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS.
- EXISTING SURVEY INFORMATION INCLUDING TOPOGRAPHIC INFORMATION PROVIDED BY STEWART, UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING, COORDINATING AND PAYMENT FOR ALL NECESSARY LOCATING SERVICES INCLUDING INDEPENDENT LOCATING SERVICES. THE CONTRACTOR SHALL PROVIDE NOTICE OF EXCAVATION TO NOTIFICATION CENTER AND FACILITY OWNERS (PER NC STATUTE) NO LESS THAN 3 BUSINESS DAYS AND NO MORE THAN 12 WORKING DAYS PRIOR TO BEGINNING DEMOLITION, EXCAVATION OR ANY OTHER FORM OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS. NO EXCAVATION OR DEMOLITION SHALL BE STARTED WITHOUT ALL UTILITIES BEING LOCATED.
- ALL SUB-SURFACE UTILITIES IDENTIFIED ON THE CONSTRUCTION DOCUMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON SURVEY INFORMATION GATHERED FROM FIELD INSPECTION AND/OR ANY OTHER APPLICABLE RECORD DRAWINGS WHICH MAY BE AVAILABLE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
- EXISTING IMPROVEMENTS DAMAGED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED OR REPLACED TO ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COORDINATING PERMITS, INSPECTIONS, CERTIFICATIONS AND OTHER REQUIREMENTS WHICH MUST BE MET UNDER THIS CONTRACT.
- THE CONTRACTOR SHALL MAINTAIN "AS-BUILT" DRAWINGS TO RECORD THE ACTUAL LOCATION OF ALL PIPING PRIOR TO CONCEALMENT, VALVE AND MANHOLE CHANGES, AND HARDSCAPE OR LANDSCAPE CHANGES. DRAWINGS SHALL BE PROVIDED TO THE OWNER'S REPRESENTATIVE AT REGULAR INTERVALS, OR AS REQUESTED THROUGHOUT THE PROJECT FOR RECORD KEEPING.
- IF DEPARTURES FROM THE PROJECT DRAWINGS OR SPECIFICATIONS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THERE OF SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY EXISTING UTILITY LINES REQUIRED TO COMPLETE ANY PORTION OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE COORDINATION AND COSTS OF THE RELOCATION AND ASSOCIATED WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS AND RUBBISH CAUSED BY THE CONTRACTOR. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE ON A DAILY BASIS.
- THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND/OR METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
- ROADWAYS (TEMPORARY OR PERMANENT) MUST BE CAPABLE OF SUPPORTING FIRE FIGHTING APPARATUS (85,000 LBS) DURING ALL PHASES OF CONSTRUCTION ONCE VERTICAL CONSTRUCTION HAS BEGUN.

SITE NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF THE CONSTRUCTION LAYDOWN AREA, PERIMETER FENCE, AND ASSOCIATED GATES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE REMOVAL OF THE CONSTRUCTION LAYDOWN AREA PERIMETER FENCE AND ASSOCIATED GATES AT THE COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL REFERENCE THE DESIGN PLANS FOR DIMENSIONS, JOINT LOCATIONS, AND INLAY SPECIFICATIONS NEAR BUILDINGS AND IN COURTYARDS. CONTRACTOR SHALL PROVIDE JOINTS IN WALKWAYS AND HARDSCAPE PER DETAILS OR AS INDICATED ON LANDSCAPE/HARDSCAPE PLAN SHEETS.
- OR
THE CONTRACTOR SHALL REFERENCE THE ARCHITECTURAL PLANS FOR DIMENSIONS, JOINTS AND INLAY SPECIFICATIONS NEAR THE BUILDING AND COURTYARD. THE CONTRACTOR SHALL PROVIDE JOINTS IN WALKWAYS EVERY TEN (10) FEET MAXIMUM, OR AS INDICATED ON ARCHITECTURAL PLANS SHEETS.
- ALL CONSTRUCTION TRAFFIC SHALL ENTER SITE FROM UNLESS OTHERWISE APPROVED IN WRITING FROM THE OWNER'S REPRESENTATIVE FOR AN ALTERNATE POINT OF ACCESS.
- REFER TO ARCHITECTURAL PLANS FOR BUILDING INFORMATION.
- ALL DIMENSIONS ARE IN DECIMAL FEET TO OUTSIDE FACE OF BUILDINGS, TO CENTERLINES, AND/OR FACE OF CURB UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATES AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO ANY CONSTRUCTION.
- ALL WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE FROM DRAWINGS.
- ALL UTILITIES WITH SURFACE ACCESS SHALL BE LOCATED WITHIN THE PAVING PATTERN AND SHALL BE COORDINATED WITH LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. REFER TO LAYOUT DRAWINGS.
- ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED.
- ALIGN ALL JOINTS, CORNERS, AND EDGES AS SHOWN
- CONTRACTOR SHALL REFER TO AND COORDINATE WITH ARCHITECTURAL, STRUCTURAL, AND MEP DRAWINGS AT ALL TIMES PRIOR TO AND DURING CONSTRUCTION.
- ALL CURB TAPERS ARE SIX (6) FEET LONG UNLESS OTHERWISE SHOWN ON PLAN.
- WHERE NEW SIDEWALK ADJOINS EXISTING WALK, PROVIDE EXPANSION JOINT BY DRILLING INTO THE FACE OF THE EXISTING WALK FOR PLACEMENT OF DOWELS. TIE NEW SIDEWALKS INTO NEAREST EXISTING PAVEMENT JOINT; MATCH WIDTH OF EXISTING WALKWAY.
- WHERE SIDEWALK OR WALKWAYS ARE ADJACENT TO PARKING SPACES THE WALKWAY SHALL BE A MINIMUM 6.5' WIDE AS MEASURED FROM THE FACE OF CURB.
- MAXIMUM RUNNING SLOPE FOR WALKING SURFACES CANNOT BE GREATER THAN 1:20 AND CROSS SLOPES CANNOT BE GREATER THAN 1:48. HANDICAP SPACES SURFACE SLOPES SHALL NOT EXCEED 1:48 IN ALL DIRECTIONS.
- SIGHT TRIANGLES - NOTHING OVER 30' HIGH SHALL BE ALLOWED WITHIN THE SIGHT DISTANCE TRIANGLES.
- THE SITE SHALL BE FULLY STABILIZED (90% COVERAGE) PRIOR TO ISSUANCE OF A BUILDING CERTIFICATE OF OCCUPANCY OR PROJECT APPROVAL.
- HANDICAP RAMPS SHALL BE INSTALLED PER LATEST EDITION OF THE NC BUILDING CODE AND ANSI 117.11 WITH DETECTABLE WARNING DOMES WITH A COLOR CONTRAST OF 70% MINIMUM. SEE DETAILS AND GRADING SPOT ELEVATIONS. IF THE EXISTING CONDITIONS PRECLUDE THE ABILITY TO PROVIDE A MAXIMUM SLOPE 1/12 FOR 6-FEET OR A MAXIMUM CROSS SLOPE OF 1:48 AND A 36" MINIMUM LANDING, THE CONTRACTOR SHALL NOTIFY ENGINEER OR OWNER REPRESENTATIVE PRIOR TO INSTALLATION.
- OR
HANDICAP RAMPS SHALL BE INSTALLED PER THE PLANS AND SPECIFICATIONS AND THE NC BUILDING CODE. A MAXIMUM SLOPE OF 1/12 FOR 6-FEET AND A MAXIMUM CROSS SLOPE OF 1:48 SHALL BE PROVIDED. IF EXISTING CONDITIONS PRECLUDE THIS REQUIREMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- THE TESTING AGENCY SHALL BE RESPONSIBLE FOR PROVIDING THE ASPHALT AND CONTRACTOR CERTIFICATION MEMO TO NCDOT FOR ALL ROADWAY IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY.

PAVING PATTERN NOTES:

- END ALL UNIT PAVING PATTERNS WITH A FULL OR HALF SIZE PAVER UNLESS OTHERWISE NOTED. USE OVERSIZE PAVERS WHERE PATTERN ENDS ON A UNIT SMALLER THAN HALF SIZE.
- LAYOUT OF UNIT PAVING PATTERNS AND CONCRETE JOINTS AS INDICATED ON THIS PLAN. REFERENCE LAYOUT PLANS FOR FURTHER PAVING LAYOUT INFORMATION.
- PAVERS ABUTTING TRUNCATED DOMES SHALL BE A CONTRASTING COLOR.
- ALIGN ALL TRUNCATED DOME PAVER JOINTS WITH ABUTTING PAVER JOINTS.
- PROVIDE CONTINUOUS EXPANSION JOINTS BETWEEN BACK OF CURB AND ADJOINING PAVEMENT.
- PROVIDE CONTINUOUS EXPANSION JOINT BETWEEN ALL VERTICAL SURFACES AND ADJOINING PAVEMENT.
- ALL DIMENSIONS MEASURED TO CENTERLINE OF JOINTS.
- ALL WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE FROM DRAWINGS.
- ALL ANGLES 90 DEGREES UNLESS OTHERWISE NOTED.
- ALIGN ALL JOINTS, CORNERS AND EDGES AS SHOWN.
- FINAL LAYOUTS TO BE APPROVED BY LANDSCAPE ARCHITECT.



STEWART

421 FAYETTEVILLE ST., SUITE 400 FIRM LICENSE # C-1051
RALEIGH, NC 27601 www.stewartinc.com
T 919.380.8750 PROJECT # C18014

Client:

BB+M ARCHITECTURE
1435 WEST MORHEAD ST - SUITE 160
CHARLOTTE, NC 28208

BB+M
ARCHITECTURE

GRUBB PROPERTIES
4601 PARK ROAD - SUITE 450
CHARLOTTE, NC 28209



Project:

STERLING
GLENWOOD

Vicinity map:

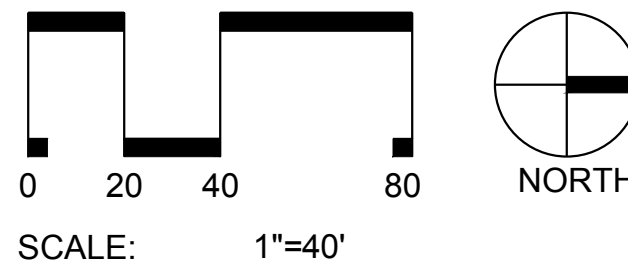


PRELIMINARY - DO NOT
USE FOR CONSTRUCTION

Issued for:

SCHEMATIC DESIGN

No. Date Description



SCALE: 1"=40'

Title:

SITE PLAN

Project number: C18014 Sheet:

Date: 05.01.2018

Drawn by: LAP

Approved by: JW

C3.00



Planning & Development

Development Services Customer Service Center
One Exchange Plaza, Suite 400
Raleigh, North Carolina 27601
Phone 919-996-2495
Fax 919-516-2685

Administrative Alternate

Administrative Alternate Request	OFFICE USE ONLY
Section(s) of UDO affected: 3.2.4D1, 1.5.6 - BUILD-TO	Transaction Number
Provide an explanation of the alternate requested, along with an applicant's statement of the findings : The project site cannot meet the built-to due to SHOD and proposed TCA requirements on the property	
Provide all associated case plan numbers including zoning and site plan: SR-##-18	

GENERAL INFORMATION		
Property Address: 3939 GLENWOOD AVENUE		Date 04/27/2018
Property PIN 0795873928, 0795882475	Current Zoning OX-3 and RX-12-CU	
Nearest Intersection: Glenwood and I440	Property size (in acres) 0.87 and 6.39	
Grubb Management, Inc	Phone 7043725616	Grubb Management, Inc
	Email sfalade@grubbproperties.com	
Project Contact Joe Puckett	Phone 919-866-4829	421 Fayetteville St, #400 Raleigh, NC
	Email jpuckett@stewartinc.com	
Property Owner Signature	Email sfalade@grubbproperties.com	
Notary		
Sworn and subscribed before me this <u>27th</u> day of <u>April</u> , 20 <u>18</u>	Notary Signature and Seal	Alan Lindholm Notary Public Union County North Carolina My Commission Expires Feb. 4, 2022



Planning & Development

Development Services
Customer Service Center
One Exchange Plaza
1 Exchange Plaza, Suite 400
Raleigh, North Carolina 27601
Phone 919-996-2495
Fax 919-516-2685

Administrative Alternate Checklist

TO BE COMPLETED BY APPLICANT		YES	N/A
ADMINISTRATIVE ALTERNATE REQUIREMENTS			
1.	The property owner must be the applicant.	X	
2.	An application, signed by the property owner and notarized to that effect, is required.	X	
3.	The applicant must submit stamped envelopes addressed to the property owners within 100 feet of the subject property as indicated in Chapter 10.2 of the Unified Development Ordinance. City staff will mail the public hearing notices.	X	
4.	The applicant shall submit pertinent material necessary for review of the alternate; in addition to the submittal material required for a subdivision, plot plan or site plan. This may include architectural renderings, materials samples or other project-specific information.	X	

Sterling Glenwood

Administrative Alternate Findings of Fact

1. The approved alternate meets the intent of the build-to regulations.

Build-to is generally intended to create a building edge along the right of way. This particular project is along I440 and Glenwood avenue which have a Special Highway Overlay district designation. The SHOD intends to push buildings back from the right of way. These ordinance regulations are in contrast to each other for this project. However, the project does meet the intent by matching the existing building edge for the building existing onsite. Additionally, if the built to was drawn off of end of the SHOD the project would comply.

2. The approved alternate conforms with the Comprehensive Plan and adopted City plans

The project is vibrant development located along Glenwood Ave and fulfills the intent of the future land use map and comprehensive plan. Project is adjacent to wide variety of transit opportunities (grentnway and bus) and supports the City's investment in transit infrastructure.

3. The approved alternate does not substantially negatively alter the character defining street wall or establish a build-to pattern that is not harmonious with the existing built context;.

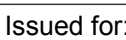
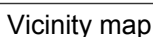
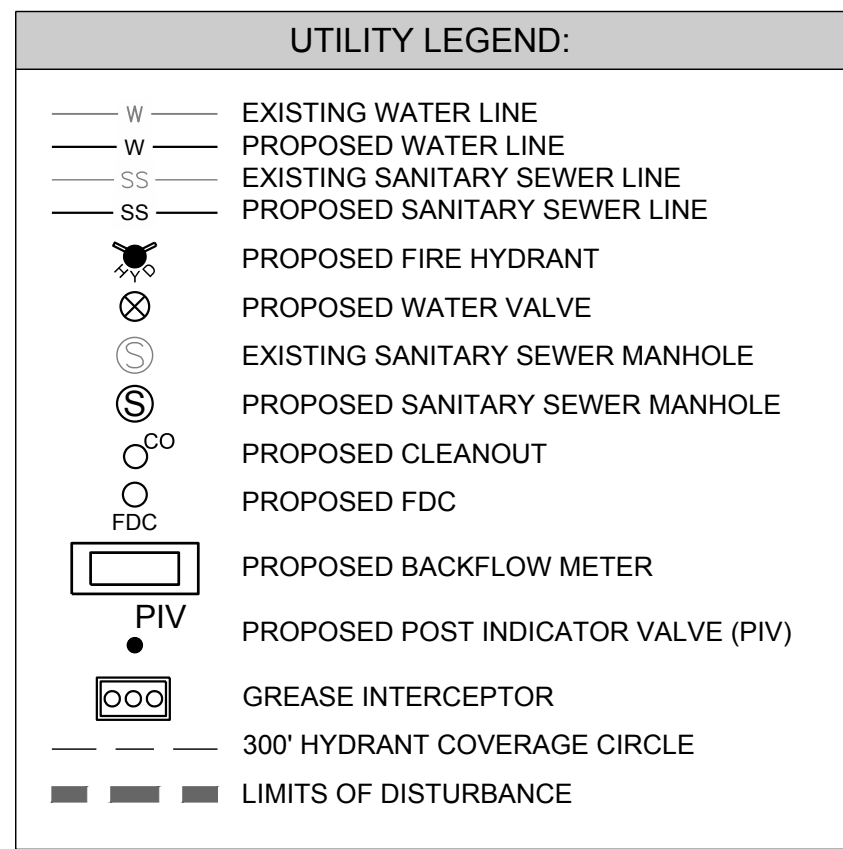
The existing street wall would be reinforced by this project but behind the SHOD. The project will be harmonious with the existing development as it will be integrated with it under the existing ownership of Sterling Glenwood Apartments.

4. The change in percentage of building that occupies the build-to area or increased setback does not negatively impact pedestrian access, comfort or safety; and.

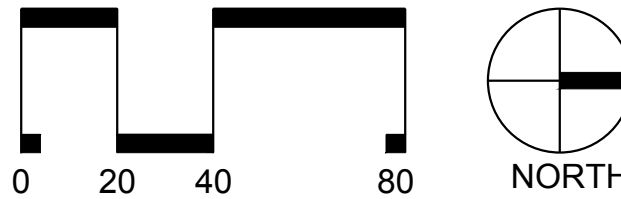
The project does not currently have any percentage existing or proposed within the current build-to. Neither increase or decrease to current build-to percentage. However the proposed buildings will align with the face of the current building onsite and would meet the build-to if it was taken from the edge of SHOD instead of the official property line.

5. Site area that would have otherwise been occupied by buildings is converted to an outdoor amenity area under Sec. 1.5.3.B..

This cannot be achieved on this site due to the SHOD and existing driveway access to the property that is being maintained as part of the project. However, the SHOD itself does create and consistent edge in this area. Also, in discussions with City Staff and NCDOT it is not desired to have pedestrians in this portion of the corridor.



No.	Date	Description
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[illegible]

SCALE: 1"=40'

Title

Project number: C18014 Sheet

Date: 05.01.2018

Drawn by: LAP

Approved by: JWP

C6.00

1. REFER TO SHEET C3.00 FOR GENERAL NOTES.
2. UNLESS OTHERWISE NOTED, ALL MANHOLES SHALL BE PRE-CAST CONCRETE STRUCTURES.
3. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF UNDERGROUND UTILITIES (WATER, SEWER, STORM, ELECTRICAL, GAS, OR OTHER) FOR THIS PROJECT WITH THE BUILDING PLANS. THE UTILITY CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE INSTALLATION OF ALL UTILITY SERVICES TO WITHIN FIVE (5) FEET OF THE BUILDING CONNECTION POINT.
4. THE CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS ON SITE AND UTILITY PROVIDERS CONSTRUCTION TO ENSURE SMOOTH TRANSITION BETWEEN DISCIPLINES.
5. THE CONTRACTOR SHALL COORDINATE ALL PEDESTRIAN AND VEHICULAR INTERRUPTIONS WITH OWNER'S REPRESENTATIVE AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.
6. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INSIDE THE PUBLIC RIGHT OF WAY PRIOR TO RECEIPT AND COMPLIANCE WITH ALL APPLICABLE NCDOT PERMITS. ADDITIONALLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY FLAGGERS AND TRAFFIC CONTROL DURING ALL WORK INSIDE THE PUBLIC RIGHTS OF WAY.
7. THE CONTRACTOR SHALL NOT RE-USE ANY FIRE HYDRANT REMOVED AS PART OF THIS PROJECT. ANY FIRE HYDRANT SHOWN TO BE REMOVED OR TO BE COATED SHALL BE REPLACED WITH A NEW FIRE HYDRANT MEETING THE LOCAL JURISDICTIONAL REQUIREMENTS AND STANDARDS.

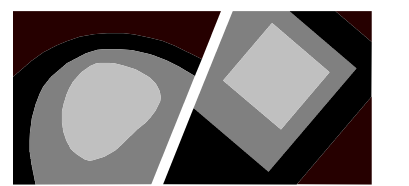
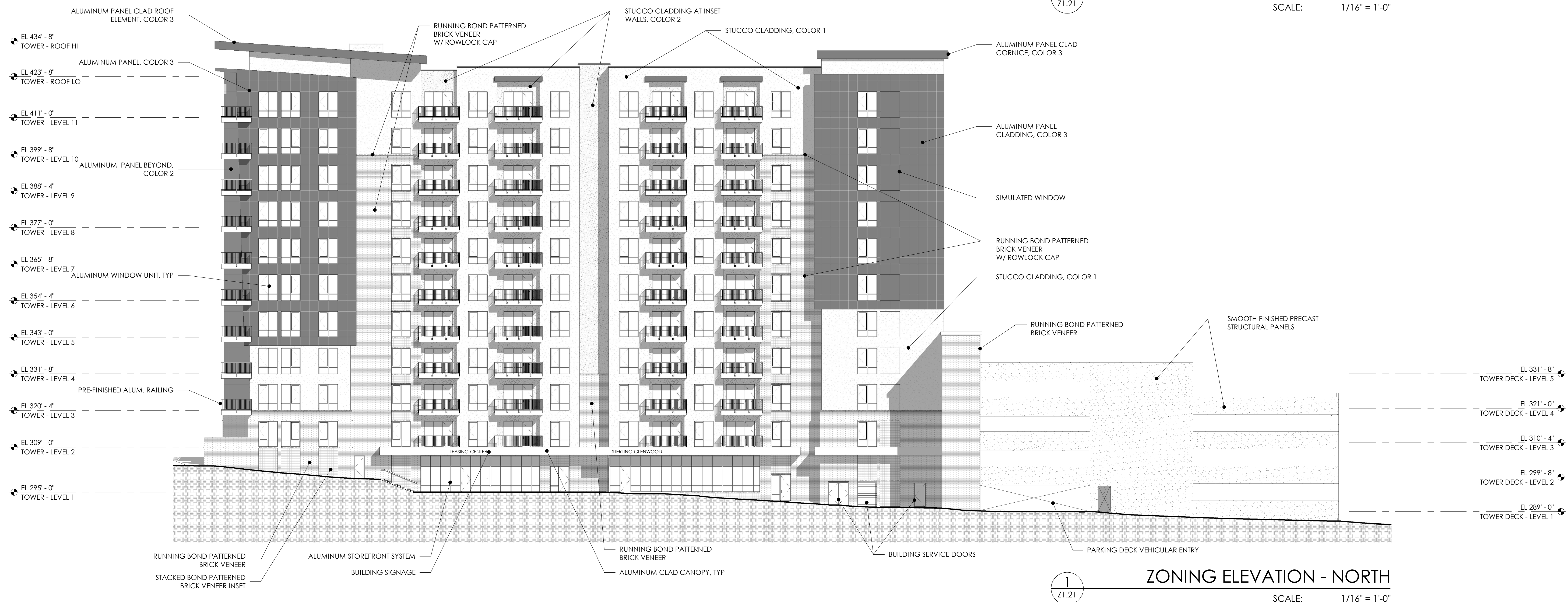
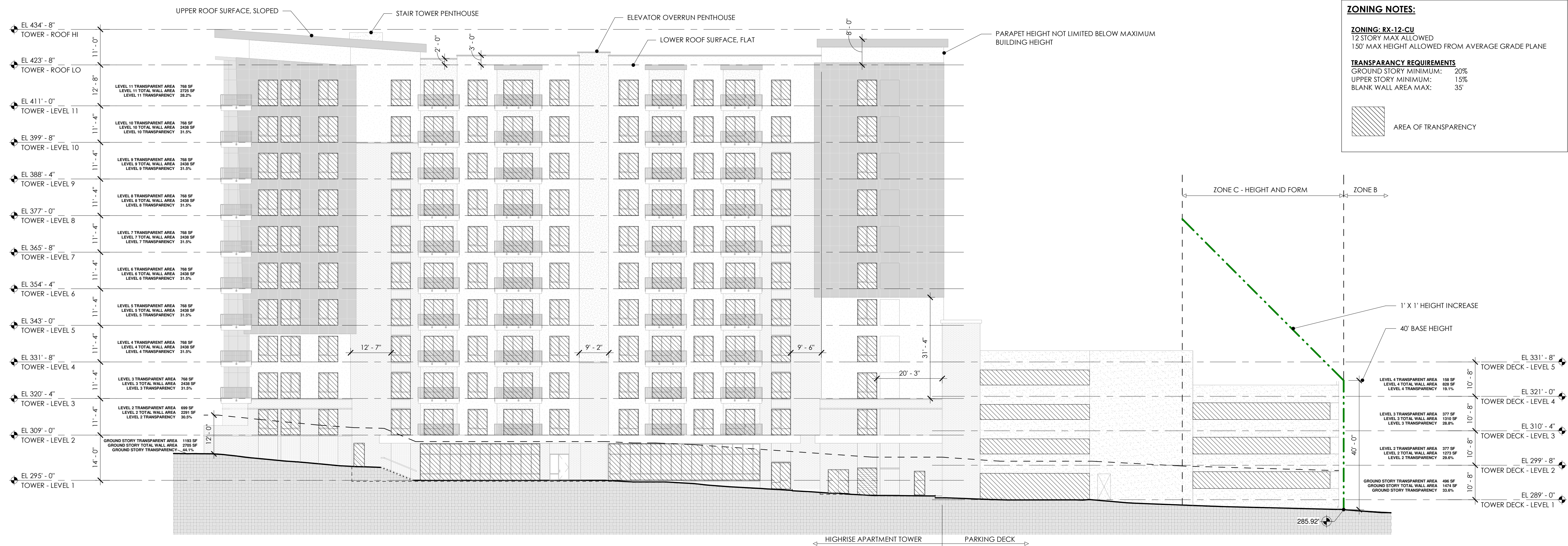
8. ALL EXISTING SUB-SURFACE UTILITIES IDENTIFIED ON THE CONSTRUCTION DOCUMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON SURVEY INFORMATION GATHERED FROM FIELD INSPECTION AND/OR ANY OTHER AVAILABLE RECORDS. DRAWINGS WHICH MAY BE IN CONFLICT WITH ANY OF THE EXISTING UTILITIES SHOWN IN PROFILE VIEWS ARE BASED ON STANDARD ASSUMPTIONS. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION, DEPTH, SIZE AND MATERIAL OF ANY AND ALL SUB-SURFACE UTILITIES PRIOR TO REFERRING TO THEM IN ANY CONSTRUCTION OR CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
9. ELEVATIONS OF UTILITIES ARE GIVEN TO THE EXTENT OF INFORMATION AVAILABLE, WHERE ELEVATIONS ARE NOT GIVEN AT POINTS OF EXISTING UTILITY CROSSINGS, SUCH ELEVATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND REPORTED TO THE ENGINEER, WHEN UNKNOWN LINES ARE EXPOSED, THEIR LOCATIONS AND ELEVATIONS SHALL ALSO BE REPORTED TO THE ENGINEER.
10. UNDERGROUND UTILITIES SHOWN ON THIS PLAN SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OF PARKING AREA, DRIVES, CURB AND GUTTER OR SIDEWALKS. ALL WALKS AND DRIVEWAYS SHALL BE INSTALLED PRIOR TO INSTALLATION OF IMPERVIOUS (ASPHALT / CONCRETE) CONDUIT SHALL BE INSTALLED FOR THE "FUTURE" UTILITY INSTALLATION.
11. AS-BUILT DOCUMENTATION REQUIREMENTS: PRIOR TO APPROVAL FROM LOCAL JURISDICTION OR ENGINEER THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS (IN BOTH PAPER AND ELECTRONIC FORMAT (CAD / PDF) PREPARED AND SEALED BY A PROFESSIONAL LAND SURVEYOR SHOWING ALL UTILITY INSTALLATION, HORIZONTAL AND VERTICAL INFORMATION SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL. STRUCTURES, VALVES, HYDRANTS, AND OTHER APPURTENANCES.

1. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT HORIZONTAL SEPARATION IN WHICH CASE;
 - a. THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER; OR
 - b. THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE OF A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
2. CROSSING A WATER MAIN OVER A SEWER, WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION, IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
3. CROSSING A WATER MAIN UNDER A SEWER, WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

1. A 24" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR BOTH THE SANITARY AND THE STORM LINES SHALL BE CONSTRUCTED OF FERROUS MATERIALS.

1. SANITARY SEWER CLEANOUTS LOCATED IN PAVEMENT AREAS SHALL BE HEAVY DUTY TRAFFIC BEARING CASTINGS.
2. UNLESS OTHERWISE NOTED, ALL SANITARY SEWER MANHOLES ARE 4' DIA.
3. MANHOLES LOCATED IN PAVEMENT, CONCRETE OR OTHER TRAFFIC AREAS SHALL BE SET AT GRADE. MANHOLES LOCATED IN OTHER AREAS (I.E. GRASS OR WOODED AREAS) SHALL HAVE THEIR RIMS RAISED SIX INCHES ABOVE THE SURROUNDING GRADE. MANHOLES SUBJECT TO POSSIBLE WATER INFILTRATION SHALL HAVE WATERTIGHT, BOLTED LIDS.
4. MINIMUM REQUIRED SLOPES FOR SEWER SERVICES:
 - 4" SEWER SERVICE - 2.00% SLOPE
 - 6" SEWER SERVICE - 1.00% SLOPE
 - 8" SEWER SERVICE - 0.50% SLOPE
5. UNLESS OTHERWISE NOTED, LOCATE SANITARY SERVICE CLEANOUTS AT ALL HORIZONTAL OR VERTICAL CHANGES IN DIRECTION. MAXIMUM SPACING BETWEEN CLEANOUTS SHALL BE 75 FEET.
6. SEWER LINES LESS THAN 3 FEET OF COVER SHALL BE CLASS 50 DUCTILE IRON PIPE. SEWER LINES WITH GREATER THAN 3 FEET OF COVER SHALL BE AS NOTED BELOW:
 - 4" SEWER SERVICE - SCH 80
 - 6" SEWER SERVICE - SCH 80
 - 8" SEWER SERVICE - SDR-35
7. SEWER LINES UNDER CONSTRUCTION SHALL BE PROTECTED FROM DIRT, DEBRIS OR OTHER CONTAMINANTS ENTERING THE NEW SYSTEM. A MECHANICAL PLUG SHALL BE UTILIZED BOTH IMMEDIATELY UPSTREAM OF THE NEW CONSTRUCTION AND AT THE FIRST MANHOLE DOWNSTREAM FROM THE EXISTING SYSTEM. EXISTING STRUCTURES, PIPING AND APPURTENANCES SHALL BE PROTECTED FROM INFLOW OF WATER, DIRT OR DEBRIS DUE TO NEW CONSTRUCTION CONNECTING TO OR IN THE VICINITY OF THE EXISTING SYSTEM. CONTRACTOR TO REMOVE DEBRIS AND PLUG PRIOR TO OCCUPANCY.
8. ALL MANHOLES COVERS SHALL BE PAINTED TO LOCAL JURISDICTIONAL REQUIREMENTS.

1. AS INDICATED, ALL WATERLINES SHALL BE DUCTILE IRON PIPE MEETING THE REQUIREMENTS OF ANSI-AWWA C151 PRESSURE, CLASS 350 OR SOFT COPPER TYPE K PIPE PER ASTM B88. IF PVC WATERLINE IS INDICATED ON THE PLANS IT SHALL MEET THE REQUIREMENTS OF AWWA C-900, CLASS 200.
2. ALL WATERLINES SHALL HAVE A MINIMUM OF 3.5 FEET OF COVER.
3. TESTING NOTES:
PRESSURE:
LEAKAGE SHALL NOT EXCEED THE MAXIMUM ALLOWABLE LEAKAGE SPECIFIED IN AWWA C-900. MINIMUM TEST PRESSURE SHALL BE 150 PSI FOR DOMESTIC AND 200 PSI FOR FIRE PROTECTION.
BACTERIOLOGICAL:
TWO SAMPLES FOR BACTERIOLOGICAL SAMPLING SHALL BE COLLECTED AT LEAST 24 HOURS APART. IF CONTAMINATION IS INDICATED, THEN THE DISINFECTION PROCEDURE AND TESTING SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.
4. THE CHLORINE IN HEAVILY CHLORINATED WATER FLUSHED FROM MAINS NEEDS TO BE NEUTRALIZED BEFORE DISCHARGE. CONTRACTORS SHALL NEUTRALIZE HEAVILY CHLORINATED WATER FLUSHED FROM MAINS PRIOR TO DISCHARGE OR TRANSPORT ALL HEAVILY CHLORINATED WATER OFFSITE FOR PROPER DISPOSAL.
5. PAINT VALVE COVERS, FIRE HYDRANTS AND OTHER WATER APPARATUS TO MEET THE LOCAL JURISDICTIONAL REQUIREMENTS.



421 FAYETTEVILLE ST., SUITE 400 FIRM LICENSE #: C-1051
RALEIGH, NC 27601 www.stewartinc.com
T 919.380.8750 PROJECT #: C18014

Client:

BB+M ARCHITECTURE
1435 WEST MORHEAD ST - SUITE 160
CHARLOTTE, NC 28208



GRUBB PROPERTIES
4601 PARK ROAD - SUITE 450
CHARLOTTE, NC 28209



Project:

STERLING
GLENWOOD

Vicinity map:



Seal:

PRELIMINARY - DO NOT
USE FOR
CONSTRUCTION

Issued for:

SCHEMATIC DESIGN

[illegible]

Scale: As indicated

Title:

PHASE 1
BUILDING &
PARKING DECK
ELEVATION

Project number: 17GRU410 Sheet:

Date: 05.01.2018

Drawn by: BB+M

Approved by: 21.21